



Claims

What is claimed is:

5 12. A device for reducing vehicle aerodynamic
resistance disposed on the rear end of a vehicle,
having a pair of swinging rear doors, the device
comprising: a pair of airfoils swingably attached to
10 opposite sides of the vehicle adjacent the rear end
thereof; the airfoils being made of flat sheets of
pliable material and having collapsible tension
bearing struts attached to the sheets and to the rear
doors; the struts having a predetermined length;
15 whereby when the doors are closed the sheets bend into
an effective curved airfoil shape reducing the
aerodynamic resistance of the vehicle when moving and
when the doors are opened the sheets flatten out
between the sides of the vehicle and the doors
allowing the doors to swing into an open position
20 generally parallel to the sides of the vehicle.

 13. A device as set forth in claim 1, wherein the
airfoils are swingably attached to the sides of the
vehicle by a plurality of hinges forward of the rear
25 end of the vehicle.

 14. A device as set forth in claim 1, wherein
there is at least one stiffening member affixed to
each flat sheet and disposed generally parallel to the
30 rear end of the vehicle.

 15. A device as set forth in claim 2, wherein
each airfoil comprises a first flat sheet attached to
the hinges and a second flat sheet affixed to the

first flat sheet, the first flat sheet being thicker and less pliable than the second flat sheet.

16. A device as set forth in claim 4, wherein
5 there is at least one stiffening member affixed to the second flat sheet and disposed generally parallel to the rear end of the vehicle.

17. A device as set forth in claim 1, wherein the
10 collapsible tension bearing struts are straps of synthetic fiber webbing.

18. A device as set forth in claim 5, wherein the
15 collapsible tension bearing struts are straps of synthetic fiber webbing.

19. A device as set forth in claim 1, wherein the flat sheets are made of aluminum.

20. A device as set forth in claim 5, wherein the
20 first flat sheet and second flat sheet are made of aluminum and the second flat sheet is sufficiently pliable to offer minimal resistance, if the vehicle is struck in the rear.

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21. A device as set forth in claim 9, wherein the first flat sheet and second flat sheet are riveted together.

22. A device for reducing vehicle aerodynamic
30 resistance disposed on the rear end of a movable vehicle, having a pair of swinging rear doors, the device comprising: a pair of airfoils swingably attached to opposite sides of the vehicle adjacent the

rear of the vehicle; the airfoils each being made of a first flat sheet of aluminum and a second flat sheet of aluminum; the second flat sheet having a plurality of stiffening members affixed thereto and disposed
5 generally parallel to the rear end of the vehicle and being thinner and more pliable than the first flat sheet; and a plurality of collapsible tension bearing struts attached to the stiffening members and to the swinging rear doors; the struts having predetermined
10 lengths; whereby when the doors are closed the second sheets bend into effective curved airfoil shapes reducing the aerodynamic resistance of the vehicle when moving and when the doors are opened the second sheets flatten out between the sides of the vehicle
15 and the doors allowing the doors to swing into an open position generally parallel to the sides of the vehicle.